

IN THE CLAIMS

1-9. (Canceled)

10. (Currently Amended) A high frequency power amplifier module comprising:

- an input terminal;
- an output terminal;
- a control terminal;
- a mode switching terminal;
- a semiconductor amplification element including a first gate and a second gate between a drain and a source, said first gate being closer to said drain for receiving the signal from said control terminal, and said second gate being closer to said source for receiving the signal from said input terminal;

a circuit for ~~feeding~~ supplying said output terminal with a signal ~~according~~ responding to the signal outputted from the drain of said semiconductor amplification element;

a bias circuit ~~connected~~ coupled with said control terminal for ~~feeding~~ supplying the second gate of said semiconductor amplification element with a bias ~~according~~ responding to a control voltage ~~fed~~ supplied to said control terminal; and

a mode switching circuit~~-activated~~ operated in response to the signal from said mode switching terminal to ~~feed~~ supply an output signal to the second gate of said semiconductor amplification element.

11. (Currently Amended) A high frequency power amplifier module according to Claim 10,

wherein said circuit disposed between said semiconductor amplification element and said output circuit includes one or more~~-cascade-connected~~ cascade-coupled second semiconductor amplification elements, and

wherein said second semiconductor amplification element includes: a control terminal~~-connected~~ coupled with the output terminal of the upstream stage semiconductor amplification element; and a first terminal~~-connected~~ coupled with either said output terminal or the downstream stage semiconductor amplification element.

12. (Currently Amended) A high frequency power amplifier module according to Claim 11, further comprising:

an AGC (auto gain control) circuit for~~-feeding~~ supplying its output to the first gate of said semiconductor amplification element.

13. (Currently Amended) A high frequency power amplifier module according to Claim 10,

wherein said high frequency power amplifier module is an amplifier system for the GSM (global system for mobile communication), when the output signal of said mode switching circuit exhibits a first state, and an amplifier system for the EDGE (enhanced data rates for GSM evolution) when the output signal of said mode switching circuit exhibits a second state.

14. (Currently Amended) A high frequency power amplifier module comprising:

- an input terminal;
- an output terminal;
- a control terminal;
- a mode switching terminal;

- a semiconductor amplification element including a first gate and a second gate between a drain and a source, said first gate being closer to said drain for receiving the signal from said control terminal, and said second gate being closer to said source for receiving the signal from said input terminal;

a circuit for ~~feeding~~ supplying said output terminal with a signal ~~according~~ responding to the signal outputted from the drain of said semiconductor amplification element;

a bias circuit ~~connected~~ coupled with said control terminal for ~~feeding~~ supplying the first gate and the second gate of said semiconductor amplification element with a bias ~~according~~ responding to a control voltage ~~fed~~ supplied to said control terminal; and

a mode switching circuit ~~activated~~ operated in response to the signal from said mode switching terminal to ~~feed~~ supply an output signal to the second gate of said semiconductor amplification element.

15. (Currently Amended) A high frequency power amplifier module according to Claim 14,

wherein said high frequency power amplifier module is an amplifier system for the GSM (global system for mobile communication), when the output signal of said mode switching circuit exhibits a first state, and an amplifier system for the EDGE (enhanced data rates for GSM evolution) when the output signal of said mode switching circuit exhibits a second state.

16-24. (Canceled)

25. (Currently Amended) A wireless communication system comprising a high frequency power amplifier module at the output stage on a transmission side,

wherein said high frequency power amplifier module includes:

an input terminal;

an output terminal;

a control terminal;

a mode switching terminal;

a semiconductor amplification element including a first gate and a second gate between a drain and a source, said first gate being closer to said drain for receiving the signal from said control terminal, and said second gate being closer to said source for receiving the signal from said input terminal;

a circuit for ~~feeding~~ supplying said output terminal with a signal ~~according~~ responding to the signal outputted from the drain of said semiconductor amplification element;

a bias circuit ~~connected~~ coupled with said control terminal for ~~feeding~~ supplying the second gate of said semiconductor amplification element with a bias ~~according~~

responding to a control voltage-~~feed~~ supplied to said control terminal; and

a mode switching circuit-~~activated~~ operated in response to the signal from said mode switching terminal to ~~feed~~ supply an output signal to the second gate of said semiconductor amplification element.

26. (Currently Amended) A wireless communication system according to Claim 25,

wherein said circuit disposed between said semiconductor amplification element and said output circuit includes one or more-~~cascade-connected~~ cascade-coupled second semiconductor amplification elements, and

wherein said second semiconductor amplification element includes: a control terminal-~~connected~~ coupled with the output terminal of the upstream stage semiconductor amplification element; and a first terminal-~~connected~~ coupled with either said output terminal or the downstream stage semiconductor amplification element.

27. (Currently Amended) A wireless communication system according to Claim 26, further comprising:

an AGC (auto gain control) circuit for ~~feeding~~
supplying its output to the first gate of said semiconductor
amplification element.

28. (Currently Amended) A wireless communication system
according to Claim 25,

wherein said high frequency power amplifier module
acts as an amplification module for the GSM (global system for
mobile communication), when the output signal of said mode
switching circuit exhibits a first state, and an amplification
module for the EDGE (enhanced data rates for GSM evolution)
when the output signal of said mode switching circuit exhibits
a second state.

29. (Currently Amended) A wireless communication system
comprising a high frequency power amplifier module at the
output stage on a transmission side,

wherein said high frequency power amplifier module
includes:

- an input terminal;
- an output terminal;
- a control terminal;
- a mode switching terminal;

a semiconductor amplification element including a first gate and a second gate between a drain and a source, said first gate being closer to said drain for receiving the signal from said control terminal, and said second gate being closer to said source for receiving the signal from said input terminal;

a circuit for ~~feeding~~ supplying said output terminal with a signal ~~according~~ responding to the signal outputted from the drain of said semiconductor amplification element;

a bias circuit ~~connected~~ coupled with said control terminal for ~~feeding~~ supplying the first gate and the second gate of said semiconductor amplification element with a bias ~~according~~ responding to a control voltage ~~fed~~ supplied to said control terminal; and

a mode switching circuit ~~activated~~ operated in response to the signal from said mode switching terminal to ~~feed~~ supply an output signal to the second gate of said semiconductor amplification element.

30. (Currently Amended) A wireless communication system according to Claim 29,

wherein said high frequency power amplifier module acts as an amplification module for the GSM (global system for

mobile communication), when the output signal of said mode switching circuit exhibits a first state, and an amplification module for the EDGE (enhanced data rates for GSM evolution) when the output signal of said mode switching circuit exhibits a second state.

31. (Currently Amended) A high frequency power amplifier module comprising:

- an input terminal adapted to be ~~fed~~ supplied with a signal to be amplified;
- an output terminal;
- a control terminal;
- a mode switching terminal;
- a semiconductor element including: a source; a drain for outputting a signal to be transmitted to said output terminal; a first gate being disposed closer to said drain; and a second gate disposed closer to said source and adapted to be ~~fed~~ supplied with the signal from said input terminal;

and

a control circuit for receiving a signal from said control terminal and a signal from said mode switching terminal to ~~feed~~ supply a bias voltage to said first gate and said second gate.

32. (Original) A high frequency power amplifier module according to Claim 31,

wherein in response to the signal from said mode switching terminal, said control circuit generates the bias voltage so that said semiconductor element may act in a linear region or in a non-linear action region.

33. (Original) A high frequency power amplifier module according to Claim 32,

wherein said semiconductor element is a dual gate FET.

34. (Currently Amended) A wireless communication system comprising:

an antenna; and

a high frequency power amplifier module for ~~feeding~~
supplying its output to said antenna,

wherein said high frequency power amplifier module includes:

an input terminal adapted to be ~~fed~~ supplied with a signal to be amplified;

an output terminal;

a control terminal;

a mode switching terminal;

a semiconductor element including: a source; a drain for outputting a signal to be transmitted to said output terminal; a first gate being disposed closer to said drain; and a second gate disposed closer to said source and adapted to be ~~fed~~ supplied with the signal from said input terminal; and

a control circuit for receiving a signal from said control terminal and a signal from said mode switching terminal to ~~feed~~ supply a bias voltage to said first gate and said second gate.

35. (Original) A wireless communication system according to Claim 34,

wherein in response to the signal from said mode switching terminal, said control circuit generates the bias voltage so that said semiconductor element may act in a linear action region or in a non-linear action region.

36. (Original) A wireless communication system according to Claim 35,

Serial No. 10/614,015

H-955-03

wherein said semiconductor element is a dual gate
FET.